

Comparisons of Job Characteristics

Focus Occupation: Welders, Cutters, Solderers, and Brazers (51-4121)

Associated Occupation: Industrial Machinery Mechanics (49-9041)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 94

Focus Occupation: Welders, Cutters, Solderers, and Brazers (51-4121)

Associated Occupation: Industrial Machinery Mechanics (49-9041)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Mechanical	6.8	20.1	9.5	<<	Extensive education and/or training may be required
Engineering and Technology	5.7	13.0	6.4	<<	Extensive education and/or training may be required
Design	5.2	11.5	6.0	<<	Extensive education and/or training may be required
Building and Construction	4.0	9.7	4.9	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 62

Focus Occupation: Welders, Cutters, Solderers, and Brazers (51-4121)

Associated Occupation: Industrial Machinery Mechanics (49-9041)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Repairing	3.4	15.6	5.9	<<	Extensive development of skills in this area may be required
Equipment Maintenance	3.5	14.6	5.9	<<	Extensive development of skills in this area may be required
Operation Monitoring	6.6	14.2	7.8	<<	Extensive development of skills in this area may be required
Troubleshooting	4.5	13.6	6.2	<<	Extensive development of skills in this area may be required
Quality Control Analysis	5.9	12.3	7.4	<<	Extensive development of skills in this area may be required

Operation and Control	5.4	11.6	5.9	<<	Extensive development of skills in this area may be required
Equipment Selection	3.3	9.8	5.4	<<	Extensive development of skills in this area may be required
Installation	1.7	6.4	1.6	<<	Extensive development of skills in this area may be required
Technology Design	2.6	5.2	1.8	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 80			
Focus Occupation: Welders, Cutters, Solderers, and Brazers (51-4121) Associated Occupation: Industrial Machinery Mechanics (49-9041)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Reaction Time	4.8	13.9	7.1	<<	Extensive improvement in abilities may be required
Control Precision	6.6	12.9	9.5	<<	Extensive improvement in abilities may be required
Manual Dexterity	6.5	12.6	10.3	<	Some improvement in abilities may be required
Hearing Sensitivity	5.6	12.1	5.5	<<	Extensive improvement in abilities may be required
Finger Dexterity	7.6	11.9	9.7	<	Some improvement in abilities may be required
Multilimb Coordination	6.0	11.5	7.4	<<	Extensive improvement in abilities may be required
Auditory Attention	5.9	11.2	6.3	<<	Extensive improvement in abilities may be required
Visual Color Discrimination	6.4	10.6	7.0	<<	Extensive improvement in abilities may be required
Speed of Limb Movement	3.2	7.7	3.4	<<	Extensive improvement in abilities may be required
Wrist-Finger Speed	3.2	7.3	3.6	<<	Extensive improvement in abilities may be required
Sound Localization	2.2	6.5	1.7	<<	Extensive improvement in abilities may be required
Glare Sensitivity	2.6	6.2	2.2	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common	Similarity of Focus Occupation to Associated Occupation: 77
Focus Occupation: Welders, Cutters, Solderers, and Brazers (51-4121) Associated Occupation: Industrial Machinery Mechanics (49-9041)	

Work Activities	Exclusivity of Activity
Apply cleaning solvents	41
Braze metal parts or components together	85
Fabricate, assemble, or disassemble manufactured products by hand	11
Identify base metals for welding	68
Identify properties of metals for repair or fabrication activities	71
Maintain welding machines or equipment	70
Move or fit heavy objects	8
Operate hoist, winch, or hydraulic boom	34
Perform detailed welding techniques	95
Perform safety inspections in industrial, manufacturing or repair setting	32
Read blueprints	10
Read specifications	23
Read technical drawings	7
Read work order, instructions, formulas, or processing charts	9
Requisition stock, materials, supplies or equipment	54
Solder metal parts or components together	73
Understand technical operating, service or repair manuals	6
Use acetylene welding/cutting torch	54
Use arc welding equipment	62
Use braze-welding equipment	92
Use combination welding procedures	68
Use hand or power tools	2
Use knowledge of welding filler rod types	75
Use soldering equipment	44
Weld together metal parts, components, or structures	54

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 85

Focus Occupation: Welders, Cutters, Solderers, and Brazers (51-4121)
Associated Occupation: Industrial Machinery Mechanics (49-9041)

Tools and Technologies	Exclusivity
Aerial lifts	13
Bandsaws and accessories	26
Business function specific software	1
Cleaning equipment	11
Computer printers	2
Computers	1
Content authoring and editing software	1
Cutting and crimping and punching tools	3
Cutting tools	18

Data management and query software	1
Electrical measuring and testing equipment	7
Face and head protection	7
Forming tools	2
Heating equipment and parts and accessories	19
Holding and clamping tools	3
Holding and positioning and guiding systems and devices	23
Indicating and recording instruments	2
Industry specific software	1
Integrated circuits	18
Ladders and scaffolding	6
Length and thickness and distance measuring instruments	2
Lifting equipment and accessories	3
Machine tools	7
Machinery for working wood and stone and ceramic and the like	12
Measuring and layout tools	3
Metal bending and forming machinery	17
Metal working machinery attachments	35
Pneumatic tools	8
Power tools	2
Prying and bending tools	10
Robotics	33
Rough and finishing tools	5
Soldering and brazing and welding machinery and supplies	6
Tool attachments and accessories	12
Vision protection and accessories	3
Wrenches and drivers	2

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.